

REMARKS

Applicants submit this Amendment in response to the Office Action dated October 5, 2010. Reconsideration of the subject application as amended herein is respectfully requested.

Claims 1-10 were pending in this case; claims 1 and 10 were the only independent claims, but claim 10 has been canceled herewith, so at present claim 1 is the only independent claim. In the Office Action, claim 1 was rejected on the basis of prior art, and claims 1 and 2 were rejected for indefiniteness; the Examiner indicated, however, that claim 2 contains allowable subject matter, and would be allowable if rewritten so as not to depend from a rejected claim, and so as to overcome the indefiniteness rejections. The Examiner also raised objections to claims 3-9 as well as an objection to the text of the specification.

Applicants appreciate the indication of allowability as to dependent claim 2, but applicants believe that independent claim 1 is allowable as well, and will explain the basis for this belief hereinbelow.

Turning first to the objections to claims 3-9 raised in paragraph 1 of the Office Action, applicants have overcome these informalities by amending the claim dependencies hereinabove so that claims 3-9 are no longer in improper multiple dependent form, and it is requested that these claims now be treated on the merits. Applicants have also overcome the Examiner's objection to the specification by introducing and/or substituting the preferred section headings at the appropriate places, in accordance with the Examiner's suggestions.

Turning next to the statutory claim rejections based upon indefiniteness under 35 U.S.C. §112, second paragraph, as enumerated in paragraphs 2-8 of the Office Action (most of which refer to lack of antecedent basis), applicants contend that each of these objections and rejections either has now been overcome by virtue of the amendments made hereinabove, or has been rendered moot by virtue of the cancellation of claim 10. Support for the wording added in claim 2, following the respective phrases "plane π " and "plane $\pi 1$ ", may be found in Table 1 of the specification, and applicants contend that the rototranslational equations to which reference is made in claim 2 (as amended) are well known in the art.

Turning finally to the patentability of the claims in light of the prior art, in paragraphs 9-13 of the Office Action claim 10 was rejected under 35 U.S.C. §102(b) for

lack of novelty, based separately upon two different prior art references, but in view of the cancellation of claim 10 hereinabove, those rejections have been rendered moot. Nevertheless, claim 1 was rejected in paragraphs 14-19 of the Office Action under 35 U.S.C. §103(a) as "obvious" over Langer. Applicants respectfully traverse this rejection, however, and contend that claims 1 and 3-9 are patentable over Langer, for the reasons set forth below.

The presently claimed invention provides a system capable of acquiring data relating to the shape and the surface colour of the object to be reproduced. The information is acquired as a series of cartesian coordinates with associated colour data, and is made available in a data format that can be used by a printer capable of reproducing in shape and colour a series of profiles of the surface of the object. The implementation in the form of a linear light beam whose striking line on the object's surface is read by a photo camera or similar device provides an adequate and structurally simple way to achieve this goal.

Langer provides a method for reproducing a three-dimensional object by means of stereolithography. The method preferred by Langer to acquire the shape of the object to be reproduced is based on the Moire effect. As it is apparent from the Examiner's summary of Langer, this choice is strictly correlated with the use of

stereolithography as the prototyping method, and thus one skilled in the art would have found no reason to replace it with another method, even if possible. According to the method used by Langer, light is projected by an illuminating apparatus through a grating over a broad area and the recording means reads the image through a reference grating in order to create fringes due to the interference between the gratings. It is apparent that the system is not suitable to acquire information about the colour of the surface of the object and, indeed, Langer does not contain any suggestion to do so. In fact, in column 3, lines 7-15, Langer suggests that the surface of the object produced be finished by etching, painting, covering or the like, regardless the colour of the surface of the original, thus teaching away from a system adapted to reproduce such color point by point.

In summary, both the shape acquiring method, and the method for producing the object, as used by Langer, are not suitable to use data about the colour of the surface of the scanned object, and thus, the document would have not been regarded as a valid starting point for the present invention. In addition, neither Langer nor any of the other documents cited by the Examiner suggests a device capable of acquiring and processing data about the colour of the surface along with data about its shape. For example, Okada discloses a system using a laser beam, but laser light is clearly

unsuitable for revealing the colour of a surface hit, and in fact *Okada* does not contain any suggestion about this feature.

Moreover, none of the cited prior art documents discloses a printer capable of recreating a colour outline of a scanned surface. For all of the foregoing reasons, applicants submit that the claimed invention would not have been obvious to one of ordinary skill in the art, and accordingly, the rejection of claim 1 should be withdrawn. Since claims 3-9 depend from claim 1 and incorporate all of its limitations, those claims should be found allowable as well.

Applicants believe that no additional filing fees are required by virtue of the claim amendments made hereinabove. Nevertheless, the Commissioner is authorized to charge any fee deficiency, or to credit any overpayment, to Deposit Account No. 07-1730. No new matter has been introduced.

The Commissioner is hereby requested to construe this paper as including a retroactive petition for a two-month extension of time in which to file a response to the outstanding Office Action, and accordingly, the official fee of \$245.00, as prescribed therefor by 37 C.F.R. §1.17(a)(2), as amended, in the case of a small entity, is submitted herewith. The Commissioner is authorized to charge any additional

extension fees which may be required, or to credit any overpayment, to Deposit Account No. 07-1730.

Applicants have responded herein to all of the points raised by the Examiner in the Office Action, and applicants have amended the claims in an earnest effort to place this application in condition for allowance. Accordingly, further favorable action in connection with this patent application is earnestly solicited. The Examiner is invited to contact the undersigned attorney by telephone if it will advance the prosecution of this case.

Respectfully submitted,

GOTTLIEB, RACKMAN & REISMAN
Attorneys for Applicants
270 Madison Avenue
New York, New York 10016-0601
(212) 684-3900

By:

David S. Kashman
(Registration No. 28,725)